SECTION 09960

HIGH PERFORMANCE COATINGS

PART 1 GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General Conditions, Division 01 - General Requirements, and other applicable specification sections in the Project Manual apply to the work specified in this Section.

1.02 SUMMARY

A. Scope: Provide labor, material, equipment, related services, and supervision required, including, but not limited to, manufacturing, fabrication, erection, and application for high performance coatings as required for the complete performance of the work, and as shown on the Drawings and as herein specified.

1. This product shall meet or exceed this criteria. Paint shall contain anti-microbial to inhibit the growth of mold, mildew, and bacterial from setting up on the dried paint film. The product shall meet or exceed 8000 scrub cycles on the ASTM D 2486 test.

B. Section Includes: The work specified in this Section includes, but shall not be limited to, the following:

1. Surface preparation.
2. Water-based two-component polyurethane-fortified paint finish system.

C. Related Sections: Related sections include, but shall not be limited to, the following:

1. Section 03300 - Cast-in-Place Concrete.
2. Section 04810 - Unit Masonry Assemblies.
3. Section 09260 - Gypsum Board Assemblies.

1.03 REFERENCES

A. General: The publications listed below form a part of this Specification to the extent referenced. The publications are referred to in the text by the basic designation only. The edition/revision of the referenced publications shall be the latest date as of the date of the Contract Documents, unless otherwise specified.

B. ASTM (ASTM)

1. ASTM D 1308, "Standard Test Method for Effect of Household Chemicals on Clear and Pigmented Organic Finishes."
2. ASTM D 2486, "Standard Test Method for Scrub Resistance of Interior Latex Flat Wall Paints."
3. ASTM D 2794, "Standard Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact)."
4. ASTM E 84-**<u>2004</u>**, "Standard Test Method for Surface Burning Characteristics of Building Materials."

C. Painting and Decorating Contractors of America (PDCA):

1. PDCA P5, "Benchmark Sample Procedures for Paint and Other Decorative Coating Systems."

D. South Coast Air Quality Management District (SCAQMD):

1. SCAQMD Rule #1168, "Adhesive and Sealant Applications," including most recent amendments.

1.04 SYSTEM DESCRIPTION

A. Performance:

1. VOC: Coatings shall have less than 50 g/l of VOC's.
2. Fire Rating: Coatings shall be Class A fire-rated, ASTM E 84.
3. Scrub Test: Greater than 3500 cycles, ASTM D 2486.
4. Impact Resistance: Greater than 60 in/lbs, ASTM D 2794.
5. Chemical Resistance: 10 (test maximum) for all chemicals tested, ASTM D 1308.
6. Finish: 10 percent to 15 percent gloss at 60 degrees.
7. Stain Removal: 8 to 10 (test maximum) for all stains tested, four-hour Open Spot Test.

1.05 SUBMITTALS

A. General: See Section 01300 – Administrative requirements, for submittal procedures.

B. Product Data: Submit product data showing material proposed. Submit sufficient information to determine compliance with the Drawings and Specifications. Product data shall include, but shall not be limited to, manufacturer's product data and application instructions.

1. Submit written proof of approval by the manufacturer and written acknowledgement that equipment to be used is approved by finish system manufacturer.

C. Finish Samples:

1. Sample Card: Submit six sample cards indicating manufacturer's standard selection of finish colors.
2. Samples: Submit four 4 inch (102 mm) by 5 inch (127 mm) samples of cardboard with specified or selected finish colors.
3. Control Samples: Submit two samples of each finish color to ensure ability to reproduce selected finishes.

D. Quality Control Submittals: Submit letter from manufacturer stating that applicator has completed manufacturer's training program.

1.06 QUALITY ASSURANCE

A. Qualifications:

1. Manufacturer Qualifications: Manufacturer shall be a firm engaged in the manufacture of decorative finishes of types and sizes required.
   a. All materials within special coatings section including, but not limited to, finishes, and primers shall be supplied by one manufacturer.
2. Applicator Qualifications: Applicator shall be approved by the manufacturer.
   a. Applicator shall certify in writing that technicians utilized for work in this Section have been trained by the manufacturer or its representative.

b. Applicator shall include in his certification that specialized equipment as required by the manufacturer shall be used for work in this Section.

B. Regulatory Requirements: Comply with applicable requirements of the laws, codes, ordinances, and regulations of Federal, State, and local authorities having jurisdiction. Obtain necessary approvals from such authorities.

1.07 DELIVERY, STORAGE, AND HANDLING

A. See Section 01600 - Project Requirements.

B. Deliver materials in unopened containers with manufacturer's labels intact.

C. Protect materials from freezing.

D. Store between 50 degrees F (10 degrees C) and 80 degrees F (27 degrees C).

1.08 PROJECT CONDITIONS

A. Apply coating under following conditions:

1. Temperature of air and substrate is between 50 degrees F (10 degrees C) and 80 degrees F (27 degrees C). Relative humidity shall be less than 50 percent.
2. Prevent wide temperature fluctuations that could cause moisture condensation on freshly coated surfaces.
3. Application areas shall be free of excessive dust.

B. Maintain minimum 80 footcandles (861 lx) on surfaces to be coated.

C. Provide adequate fresh air and ventilation during application.

1.09 WARRANTY

A. General: See Section 01780 - Closeout Submittals.

B. Special Warranty: The manufacturer shall warrant the work of this Section to be in accordance with the Contract Documents and free from faults and defects in materials for a period of five years from date of Substantial Completion. This special warranty shall extend the one year period of limitations contained in the General Conditions.

C. Additional Owner Rights: The warranty shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be in addition to and run concurrent with other warranties made by the Contractor under requirements of the Contract Documents.

1.10 MAINTENANCE MATERIALS

A. Extra Stock: Provide 5 gallons (18.9 l) of each base coat color used per site. Provide in sealed, labeled containers.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Master Coating Technologies Scuffmaster: www.scuffmaster.com
B. Zolatone: www.zolatone.com

C. MDC Wallcoverings: www.mdcwall.com
D. Substitutions: See Section 01600 - Project Requirements.

1. Submit proposed substitution to the Architect no fewer than 10 days before bid date. Acceptance will be by Addendum.
2. Submit finish samples to match color of specified finishes, product data, application instructions, test reports, etc. Clearly indicate discrepancies between specified product and proposed substitution.

2.02 MATERIALS

A. Primer: Provide primer recommended by manufacturer for substrate.

1. Concrete and Masonry: Suitable heavy-bodied latex vinyl acrylic block filler. Provide manufacturer's recommended product if uniform base color with pores exposed is desired.
2. Primed Metals: No primer required.
3. Unprimed Metals: In accordance with the manufacturer's recommendations.
4. New Gypsum Board: 100% Acrylic Interior Latex Primer recommended by the manufacturer.

B. Finish System Components:

1. Finish Coat: Two-component polyurethane-fortified coating and cross-linker.
a. Basis of Design: "Scuffmaster ScrubTough," Master Coating Technologies.
2. Miscellaneous Materials: Surface patching compounds and other materials necessary for application of finish system shall be of high quality and compatible with coating system.

2.03 EQUIPMENT

A. Spray or roll primers and base coats in accordance with manufacturer's instructions.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verification of Conditions: Examine areas and conditions under which the work is to be applied, and notify the Contractor in writing, with a copy to the Owner and the Architect, of any conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected.

1. Verify that substrates are ready to receive work of this Section and are in accordance with coating manufacturer's requirements. Report any conditions that would adversely affect the appearance or performance of the coating systems.
2. Beginning of the work shall indicate acceptance of the areas and conditions as satisfactory by the Applicator.

3.02 PREPARATION

A. Protection: Mask adjacent surfaces to protect from overspray. Protect floors and other surfaces with drop cloths.

1. Remove items which are not to be coated from surfaces that are to be coated. Tag and protect removed items and store until re-installation. Re-install items after completion of coating application. Items which are not to be coated include, but shall not be limited to, operating hardware, electrical device plates, and factory-finished Items.

2. Patch and repair substrates as specified in applicable specifications sections. Clean substrates. Remove dirt, grit, loose materials, grease, oil, temporary protective coatings, contamination, other foreign materials, etc. Sand with 100 grit or finer sand paper, spackle, putty, and caulk existing surfaces to produce smooth and uniform substrates. Spot-prime existing water-soluble stains with alcohol or oil-based stain killing primer. Touch-up painted or primed surfaces with compatible paint or specified primer.

B. Concrete: Remove high spots, fill holes and clean surfaces as specified in Section 03300 - Cast-In-Place Concrete. Allow new concrete to cure a minimum of 28 days prior to application of coatings.

C. Masonry: Tool joints and clean surfaces as specified in Section 04810 - Unit Masonry Assemblies. Rinse off cleaning solutions and allow surface to dry. Allow new mortar to cure a minimum of 28 days prior to coating.

D. Ferrous Metals: Remove rust and mill scale. Wire brush or sand damaged or rusted areas to bright metal. Remove grease and other foreign materials with mineral spirits. Touch-up damaged areas of shop primer.

E. Aluminum: Thoroughly degrease using non-hydrocarbon solvent cleaner. Etching is recommended before priming if possible. As an alternative, use a wash primer prior to the paint application.

F. Non-Ferrous Metals: Clean with lacquer thinner.

G. Wood: Sand smooth and free of marks as specified in Section 06 20 00 - Finish Carpentry. Wash sap spots and knots with mineral spirits. When dry, cover spots and knots with two coats of shellac.

H. Plaster: Allow new plaster to cure a minimum of 28 days prior to coating.

I. Gypsum Board: Apply joint tape and compound to joints, fastener heads, dents, and surface flaws as specified in Section 09260 - Gypsum Board Assemblies. Sand smooth and flush with adjacent surfaces. Thoroughly clean sanded areas of dust with a clean damp rag.

J. Ceramic Tile and Glazed Block: Thoroughly clean off oil, wax, grease, and other residues. De-gloss with either mechanical abrasion or chemical etch. Remove sanding dust with a clean, wet rag.

K. Previously Painted Surfaces: De-gloss (if necessary) and re-prime previously painted substrates with manufacturer’s recommended primer.

3.03 APPLICATION

A. Applicator shall apply coatings in accordance with **the 2005 Virginia State Fire Prevention Code and** manufacturer's written instructions.

1. Closets and storage areas shall be finished inside in the same manner as adjoining rooms.
2. Finish HVAC registers and grilles and other items located in surfaces to receive coatings.

B. Apply as many primer coats as necessary to produce a uniform substrate appearance. Do not exceed manufacturer’s recommended coverage rate. Allow to dry prior to application of subsequent coats.

C. Re-prime suction and hot spots on substrate prior to applying base coatings.

D. Over wood and gypsum board, sand primer with 100 grit or finer sand paper. Thoroughly remove dust from sanding with a clean, wet rag.

E. Spray or roll finish to completely cover primer and according to manufacturer's written instructions. Apply in a continuous, even film at manufacturer's specified coverage rate.

F. Apply each coat to a natural break point such as an edge or corner without stopping.

G. Finishes shall match approved benchmark samples and shall be free of runs, sags, holidays, and excessive irregularity/unevenness of pattern coat. Transitions between colors and/or other materials shall be sharp, clean and without overlaps.

3.04 INSPECTION

A. Request acceptance of each coat before applying succeeding coats.

B. Touch-up and repair unacceptable work.

C. Protect finished areas from damage.

3.05 CLEANING

A. Clean overspray and spills. Remove masking.

B. Repair damage to coatings and surfaces caused by clean-up activities.

3.06 PROTECTION

A. Provide final protection and maintain conditions in a manner acceptable to the Applicator, that shall ensure that the high performance coatings shall be without damage at time of Substantial Completion.

END OF SECTION